American College of Emergency Physicians

Military Trauma Cares’ Learning Health System and its Translation to the Civilian Sector

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ACEP

- A body of emergency physicians dedicated to the enhancement and advancement of acute care of our patients
- 32,000 emergency physicians throughout the US
  - Additional members include international physicians, residents, subspecialties, physician’s assistants etc.
- Collaborative working body with colleagues who affect emergency care
- Primary entity in US representing emergency physicians
- Supports education, research, public outreach
Government Services Chapter ACEP (GSACEP)

- 1,500 members
- Federally affiliated emergency physicians
  - Majority with military service
- Annual education meeting
- Members in CONUS/OCONUS
Personal Background

• Enlisted medics in USAF
• Served as active duty emergency physicians with combat experience
• Assisted in development and deployment of Critical Care Transport Teams and Mobile Field Surgical Teams
• Board certified and currently serve as civilian EMS Medical Directors
• Active educators and researchers
• Continue military service in the National Guard
Perspective on Charge to the Committee

• Primary concern related to prehospital and initial hospital care
  – Systems development and integration
  – Point of injury care
  – En-route care
  – Initial resuscitation

• “Evidence Guided”
  – Key component
    • Identify differences in environment and patient population which could alter translation
Education

• Models
  – Didactics—case based/flipped classroom
  – Simulation
  – CSTARS concept
  – Draw down/force shaping --- integration with civilian ems agencies and facilities
  – Live tissue/fresh cadaver availability

• Clearly identify levels of evidence associated

• Shared Clinical Practice Guidelines
Clinical Data Transmission and Analysis

• How
• Storage
• Why?
  – Process Improvement and Quality Assurance
Current Examples

• Tourniquet application
  – Almost universally adopted in EMS
    • Application
    • Removal?

• Tranexamic Acid
  – Current helicopter trials anticipated
  – Current use: administered in 50% patients who do not have uncontrolled hemorrhage

• Surgical airway management
  – Morbidly obese patient
The Remote Trauma Outcomes Research Network: Rationale and methodology for the study of prolonged out-of-hospital transport intervals on trauma patient outcome

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The time elapsed between injury and hemostasis is inversely proportional to survival and functional recovery in the trauma patient. Yet, we remain largely naïve to the pathophysiologic sequence that unfolds during this critical time frame. Likewise, prolonged evacuations encountered by critically wounded combatants may pose similar hazards. Little room for improvement remains in hospital-based care, however, when one considers the 97% survival rate for casualties engaged by the Joint Trauma System. In contrast, the out-of-hospital and preoperative phase ultimately, it may enable the establishment of remote damage-control resuscitation (RDCR) as a clinical practice.

Epidemiologically, trauma is the fourth leading cause of death in the United States and leads among people younger than 44 years. Blunt mechanisms predominate, with subpopulations and geospatial sectors in which penetrating trauma has a higher prevalence. This threat is amplified exponentially during armed conflict. While the modern battlefield has greater geospatial expanse, the primary wounding mechanisms and...
Approximate Distances (Miles)

- Bagram to Mazar-I-Sharif = 170
- Bagram to Khost = 120
- Bagram to Ghazni = 90
- Bagram to Jalalabad = 75


Figure 1. Afghanistan contemporary operational area

Approximate Distance (Miles)

- San Antonio to Del Rio = 150
- San Antonio to Eagle Pass = 125
- San Antonio to Carrizo = 90
- San Antonio to Uvalde = 80

Courtesy Texas Department of State Health Services [http://www.dshs.state.tx.us/emstrausystems/ets.htm](http://www.dshs.state.tx.us/emstrausystems/ets.htm)
Combat Medical Environment
En-route Care
Welcome

The EMS State of the Sciences Conference (dubbed by media as "A Gathering of Eagles") has become one of the most progressive and important EMS conferences worldwide.

The faculty, derived from the U.S. Metropolitan Municipalities EMS Medical Directors Consortium (The "Eagles" Coalition) is comprised of most of the jurisdictional EMS Medical Directors for the nation’s 35 to 40 largest U.S. cities’ 9-1-1 systems as well as the chief medical officers for several pivotal federal agencies such as the FBI, U.S. Secret Service, White House Medical Unit and also includes several global municipalities such as London (UK) and Sydney (Australia).

In essence, this small but cohesive cadre of leading emergency medical services specialists not only oversee the medical aspects of day-to-day 9-1-1-type emergency responses and early resuscitative interventions for trauma, stroke, cardiac care and other critical emergencies in the nation’s (and some of the world’s) most populous cities, but most of them are also responsible for much of the medical aspects of homeland security and disaster management in these high-risk venues (in which nearly 100 million persons dwell and make their livelihood). Their ability to deal with these significant responsibilities is, in many ways, facilitated by the close cooperation of this unique convolution of physicians who also generally serve as the main interface between local government and the medical community at large in these metropolitan municipalities.

The purpose of the highly popular annual Eagles conference is to share with participants --- and faculty alike --- the most cutting-edge information and advances in EMS patient care, research and management issues --- as well as trending challenges (and lessons learned from those challenges) --- while also introducing novel patient care strategies and techniques.
Gathering of Eagles

• 25 largest municipalities EMS Medical Directors
• Weekly, if not daily interchanges
• Collaborative research framework
• Willingness to participate in process improvement activities
• Ex
  – Ketamine implementation
Total Number of Calls

- 100,000 Calls
- 100,000 - 200,000 Calls
- 200,000 + Calls

Locations with different call counts:
- Boston, MA
- Houston, TX
- Seattle, WA
- Austin, TX
- Atlanta, GA
- Anchorage, AK
- San Francisco, CA
- Portland, OR
- Dallas, TX
- Denver, CO
- New Orleans, LA
- Chicago, IL
- Ft. Lauderdale, FL
- Philadelphia, PA
- New York, NY
Emergency Medicine Prehospital Potential Outreach

• Population served
  – 71 million

• Providers
  – 94,000

• Annual response
  – 8.9 million

• Municipal, Fire, Hospital based EMS agencies
Opportunities

• ACEP and GSACEP welcome the opportunity to provide input and collaborate with other organizations and entities

• Appreciative of the organizations participating today
ACEP and GSACEP

• Recognize the challenges of this project
• Appreciate the emphasis and resourcing to develop translation strategies for trauma care
• Standing by to assist
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